Smart Skies™

LineUp With Math™ Simulator User Guide
For Version 1.0
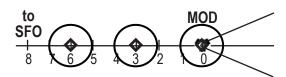
NASA

LineUp With Math Simulator
Solving NASA Problem 3-6

Smart Skies™

NASA

Clock

Running Time

Time for Best Solution

00:17
Target 3:36

Cloud

Route is Closed

③ Change Plane Speed or Route

AAL12
600 kts

Data Tag - click and drag to move

Callsign - click to view or change route

Plane Speed - click to change speed

20 MINAH

25

30

35

40

15

35

10

30

5

DAL88
600 kts

5

MOD

OAL

TPH

25

UAL74
600 kts

10 5   5   10   15   20   25   30   35

5

5

LIDAT

10

15   20   25   30   35

20

Sector 33

① Problem

Active Problem Number

Click to select a problem

Select Problem

▷ ‖ ⏩ ⏭

Reset

② Run Simulator

Normal Speed

Pause

4 Times Normal speed

10 Times Normal Speed

Reset problem to starting conditions

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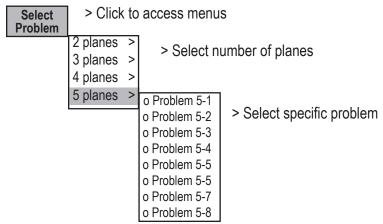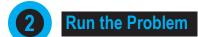
Goal

to SFO

MOD

8 7 6 5 4 3 2 1 0

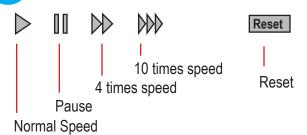Line up the planes at MOD using route or speed change so that:
- they are 3 miles apart
- the last plane arrives as soon as possible
- before MOD, the planes are never closer than 2 miles.

1 Select a Problem

Select Problem

> Click to access menus

2 planes >
3 planes >
4 planes >
5 planes >

> Select number of planes

o Problem 5-1
o Problem 5-2
o Problem 5-3
o Problem 5-4
o Problem 5-5
o Problem 5-5
o Problem 5-7
o Problem 5-8

> Select specific problem

2 Run the Problem

▷ ❚❚ ⏩ ⏭

Reset

10 times speed

4 times speed

Reset

Pause

Normal Speed

3 Change Plane Route or Speed

You change a plane's route or speed to change the spacing of planes.
You can change a plane's route or speed while the problem is running or paused.
You use the plane's datatag to make the changes.

Plane's datatag

DAL88
600 kts

Callsign

Speed in knots

> Click and drag to move

View a plane's planned route

> Click the plane's call sign to see the route menu

> Click Show Route

(If the simulator is Paused, the route will also show markers for where the plane will be in 1, 2, and 3 minutes)

Change a plane's route

> Click the plane's call sign to see the route menu

> Click the new route

(The route will be highlighted for 15 seconds.)

Change a plane's speed

> Click the plane's speed to see the speed menu

> Click the new speed

(If the simulator is Paused, the new speed will not show until the simulator is running.)